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1. The chief modern machine used in the construction of the Moscow subway ran on tracks which were laid down as the work advanced. It was nine meters high, thirty-five meters long, projecting approximately 2 1/2 meters beyond the front wheels. Before it were two tiers; four men on each tier used pneumatic drills against the earth, which was automatically carted away every two minutes, though in some instances the earth was shoveled onto canvas belts.
2. When the excavation measured 80 cm*, the arms of the machine smoothed the tunnel into a circle with a diameter of nine meters, and twelve iron plates, each 80 cm. wide, were applied to line it completely. Quick-drying liquid cement was forced through the plate openings by air pressure before screws were applied by hand wrenches to connect the plates. Except for the tunneling machine, all work was performed by hand.
3. The first layer of the tunnel floor consisted of cement and gravel 40 cm. thick; the second was cement and sand, 70 cm. thick. In sequence: 50 cm of reinforced concrete; five cm of impregnated cardboard and asphalt. When the latter cap cooled, it was pounded with a board and then covered with another 50 cm layer of reinforced concrete. Permanent rails were then laid and the sides about them were finished off with cement and sand. A great deal of water was encountered during the excavation work.
4. Construction cost is estimated by source at eighty to ninety million rubles per kilometer, rising to 120 million rubles in some difficult stretches.
5. Each subway station has four ventilating chambers. Air compressors for ventilation are located every five to six kilometers. There are also many connecting chambers [redacted] which [redacted] may serve some secret purpose, since they appear unnecessary for pure transportation usage.
6. The Moscow subway system consists roughly of two concentric rings, 16 and 24 kilometers in length, and a third under construction which will be 40 kilometers long. Also being built is a shuttle line of six kilometers which will connect the three rings. This shuttle line passes

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Class. CHANGED TO: TS S (C)

DDA Memo, 4 Apr 77

Auth: DDA REG. 7

08/11 : CIA-RDP82-00457R002800530011-5
Date: 31 May 78

Approved For Release 2003/08/11 : CIA-RDP82-00457R002800530011-5

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through the Lenin Library Station near the Kremlin. This station has doors which may be operated from an observation point; [redacted] the existence of which is not generally known, may serve to isolate the subway in the event of gas attack.

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[redacted] Comment: [redacted] 80cm forward, i.e., deep enough for the next set of 80cm-wide iron plates.

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